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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER SUBRAMANIAN, NARAYANSWAMY	
			ART UNIT 3691	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/784,892

Applicant(s)

LEJDSTROM ET AL.

Examiner

Narayanswamy Subramanian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/23/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to applicant's communication of February 24, 2004. Amendments to the specification have been entered. Original claims 1- 2 are pending and have been examined. The rejections are stated below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1- 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 2 recite the limitation "participants in the CSD". It is not clear what the applicant means by this limitation. Appropriate clarification/correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1 and 2 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory Subject matter.

35 USC 101 requires that in order to be patentable the invention must be a "new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" (emphasis added).

It is not clear as to which statutory class claim 1 belongs. The claimed invention does not fall in the process category for the following reason. Quoting from *In re Comiskey* (No. 06-1286, *Federal Circuit*) “The Supreme Court has recognized only two instances in which such a method may qualify as a section 101 process: when the process ‘either [1] was tied to a particular apparatus or [2] operated to change materials to a ‘different state or thing.’” In *Diehr*, the Supreme Court confirmed that a process claim reciting an algorithm could state statutory subject matter if it: (1) is tied to a machine or (2) creates or involves a composition of matter or manufacture.¹² 450 U.S. at 184. There, in the context of a process claim for curing rubber that recited an algorithm, the Court concluded that “[t]ransformation and reduction of an article ‘to a different state or thing’ is the clue to the patentability of a process claim that does not include particular machines.” *Id.* (quoting *Benson*, 409 U.S. at 70);¹³ see also *In re Schrader*, 22 F.3d 290, 295 (Fed. Cir. 1994) (holding when a claim does not invoke a machine, “§ 101 requires some kind of transformation or reduction of subject matter”). Thus, a claim that involves both a mental process and one of the other categories of statutory subject matter (i.e., a machine, manufacture, or composition) may be patentable under § 101. However, mental processes—or processes of human thinking—standing alone are not patentable even if they have practical application. The Supreme Court has stated that “[p]henomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.” *Benson*, 409 U.S. at 67 (emphasis added). In *Flook* the patentee argued that his claims did not seek to patent an abstract idea (an algorithm) because they were limited to a practical application of that idea—updating “alarm limits” for catalytic chemical conversion of hydrocarbons. 437 U.S. at 586, 589-90. The Court rejected the notion

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that mere recitation of a practical application of an abstract idea makes it patentable, concluding that “[a] competent draftsman could attach some form of post-solution activity to almost any mathematical formula.” Id. at 590. Since all other features of the process were well-known, including “the use of computers for ‘automatic monitoring-alarming,’” the Court construed the application as “simply provid[ing] a new and presumably better method for calculating alarm limit values.” Id. at 594-95. The 14 See AT&T, 172 F.3d at 1355, 1358 (holding patentable “a process that uses the Boolean principle in order to determine the value of the PIC indicator” and that “require[d] the use of switches and computers”); State Street Bank, 149 F.3d at 1373 (“[W]e hold that the transformation of data . . . by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm.” (emphases added)); Alappat, 33 F.3d at 1544 (“This is not a disembodied mathematical concept which may be characterized as an ‘abstract idea,’ but rather a specific machine to produce a useful, concrete, and tangible result.” (emphases added)); *Arrhythmia Research Tech., Inc. v. Corazonix Corp.*, 958 F.2d 1053, 1058-59 (Fed. Cir. 1992) (holding patentable a method for analyzing electrocardiograph signals for the detection of a specific heart condition that used “electronic equipment programmed to perform mathematical computation”). Court held the application unpatentable because “if a claim [as a whole] is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is nonstatutory.” 437 U.S. at 595 (quoting *In re Richman*, 563 F.2d 1026, 1030 (CCPA 1977)). Following the lead of the Supreme Court, this court and our predecessor court have refused to find processes patentable when they merely claimed a mental process standing alone and untied to another category of statutory subject matter even when a

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practical application was claimed. In *Schrader* we held unpatentable a “method constitut[ing] a novel way of conducting auctions” by allowing competitive bidding on a plurality of related items. 22 F.3d at 291. In doing so, we rejected the patentee’s argument that the process used a machine. Two of the alleged machines—a “display” in the front of the auction room and “a closed-circuit television system” for bidders in different cities—were not claimed by the patent, and the third—a “record” in which bids could be entered—could be “a piece of paper or a chalkboard.” *Id.* at 293-94. We therefore concluded that the patent impermissibly claimed unpatentable subject matter. Similarly, in *In re Warmerdam*, 33 F.3d 1354 (Fed. Cir. 1994), we held unpatentable a process for controlling objects so as to avoid collisions because the key steps of “locating a medial axis” and “creating a bubble hierarchy” described “nothing more than the manipulation of basic mathematical constructs, the paradigmatic ‘abstract idea.’” *Id.* at 1360. A machine was not required, *id.* at 1358, nor was there any indication that the process operated on a manufacture or composition of matter. Decisions of our predecessor court are in accord. *In re Meyer*, 688 F.2d 789, 796 (CCPA 1982), held that “a mental process that a neurologist should follow” was not patentable because it was “not limited to any otherwise statutory process, machine, manufacture, or composition of matter.” *Id.* at 795. Similarly, *In re Maucorps*, 609 F.2d 481 (CCPA 1979), held that an invention “[u]ltimately . . . directed toward optimizing the organization of sales representatives in a business” was unpatentable. *Id.* at 482, 486. See also *Alappat*, 33 F.3d at 1541 (“*Maucorps* dealt with a business method for deciding how salesmen should best handle respective customers and *Meyer* involved a ‘system’ for aiding a neurologist in diagnosing patients. Clearly, neither of the alleged ‘inventions’ in those cases falls within any

§ 101 category.”). The steps of the method are untied to another category of statutory subject matter and hence the claimed invention does not qualify as a process under 35 U.S.C 101.

Claim 2 of the disclosed invention is inoperative and therefore lacks utility. Claim 2 merely recite elements of an apparatus or a system (“an automated function or sub-function” corresponds to software program elements and not tangible hardware components) without showing any ability to realize functionality of the recited elements (i.e. functional descriptive material per se) and therefore is rendered inoperative lacking any utility. The automated functions and automated sub-functions are interpreted as software. Note that a computer (or software program) code cannot by itself perform the underlying function until it is loaded on some computer readable memory and accessed by the computer (or a processor).

Functional descriptive material, per se, is not statutory. This is exemplified in *In re Warmerdam*, 31 USPQ2d 1754, where the rejection of a claim to a disembodied data structure was affirmed. Thus a claim to a data structure, per se, or other functional descriptive material, including computer programs, per se, is not patent eligible subject matter.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1- 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fung (US Pub. No. 2004/0006529 A1).

Claims 1 and 2, Fung discloses a method and system for carrying out financial transactions within a Central Securities Depository, comprising an automated clearing process and an automated settlement process, the clearing process being the process of preparing the transactions for the settlement process, the clearing process comprising the following automated sub processes: selecting a settlement rule to be followed in the clearing process, the rule defining how the transaction is to be settled (See Fung Paragraphs 64-67), defining a settlement obligation group, said group comprising a number of settlement instructions that all have to be settled at the same time (See Fung Paragraphs 11 and 74-81), "locking in" of the assets which the transaction concern, the locking-in having the effect of reserving said assets for a specific settlement instruction (See Fung Abstract, Claim 1 and Paragraph 11), and the settlement process comprising the following automated sub processes: selecting transfer instructions for all settlement obligations belonging to said settlement obligation group, said transfer instructions being irrevocable instructions to transfer (the locked-in) assets between participants in the CSD (See Fung Paragraphs 33-40 and 74-81), checking that all transfer instructions are carried out successfully (See Fung Paragraphs 49-67), reporting the result of the settlement to the participants involved (See Fung Paragraphs 49-67). A system with automated functions and automated sub-functions to perform some of the above steps are inherent in the disclosure of Fung.

Fung does not disclose the feature wherein all of the steps are automated.

Official notice is taken that automating functions for carrying out a transaction is old and well known in the art. Such automation increases the efficiency and speed of transactions. It would have been obvious to one of ordinary skill in the art at the time of invention to modify

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Fung to include this feature. This would have helped increase the efficiency and speed of transactions.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure are listed on the attached form PTO-892.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Narayanswamy Subramanian whose telephone number is (571) 272-6751. The examiner can normally be reached Monday-Thursday from 8:30 AM to 7:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached at (571) 272-6771. The fax number for Formal or Official faxes and Draft to the Patent Office is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PMR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Dr. N. Subramanian
Primary Examiner
Art Unit 3691

January 16, 2008